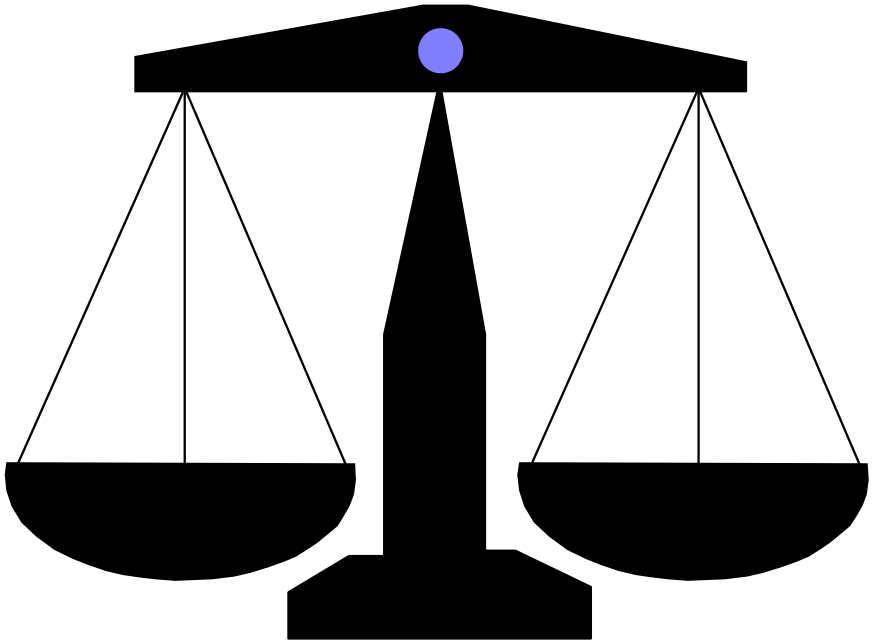
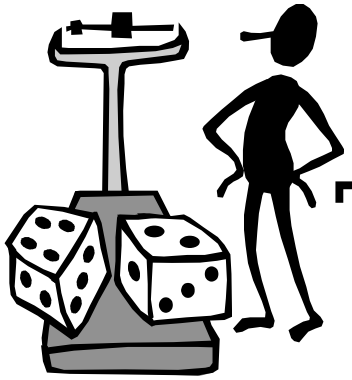
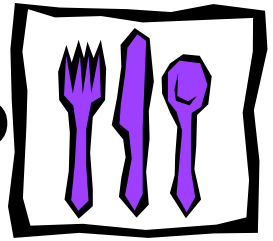
Nondiet Approaches to Weight Management

Finding The Balance



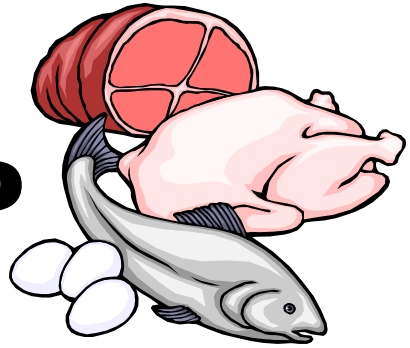


True or False???



- You may be losing body fat even though the scales stay the same
- As we get older, metabolism decreases
- The best way to lose weight is to just count fat grams
- People tend to under estimate their food intake and over estimate their exercise intake
- Fat give more than twice as many calories as carbohydrates

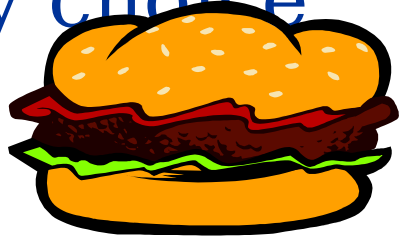
True or False???



- A high protein, low carbohydrate diet is best when attempting weight loss
- Food manufacturers can put whatever health claims or descriptions (ie. lowfat) they want on their food packages
- Skipping meals is a good way to lose wt
- Light and moderate exercise use fat as the primary fuel source

True or False???

- A serving of food less than 5 grams of fat is considered low fat
- A hamburger can easily fit into a low fat meal plan
- Fast food entrees should be no more than 15 grams of fat to be healthy and low fat
- A Taco Bell salad is a healthy choice for lunch



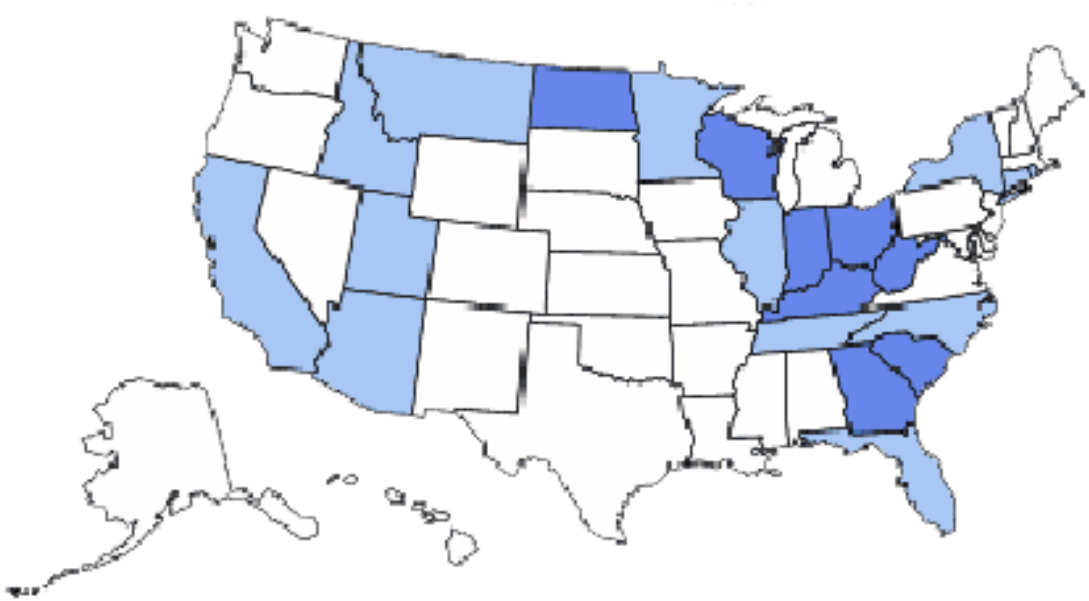
What is Obesity?

- **Defined as being 20% above the Ideal Body Weight on 1983 Metropolitan Life Insurance Height/Weight Tables**
- **Considered to be the level where health risks increase significantly**
- **In 2002:**
  - **61% of adults in the US were overweight or obese**
  - **13% of children aged 6 to 11 years and 14% of adolescents aged 12 to 19 years were overweight in 1999**

Obesity Trends* Among U.S. Adults

BRFSS, 1985

(BMI≥ 30, or ~ 30 lbs overweight for 5'4" woman)



No Data <10% 10%-14% 15-19% ≥20%

Source:Mokdad A.H, et al. *J Am Med Assoc* 2001;286:10

CDC
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Obesity Trends* Among U.S. Adults

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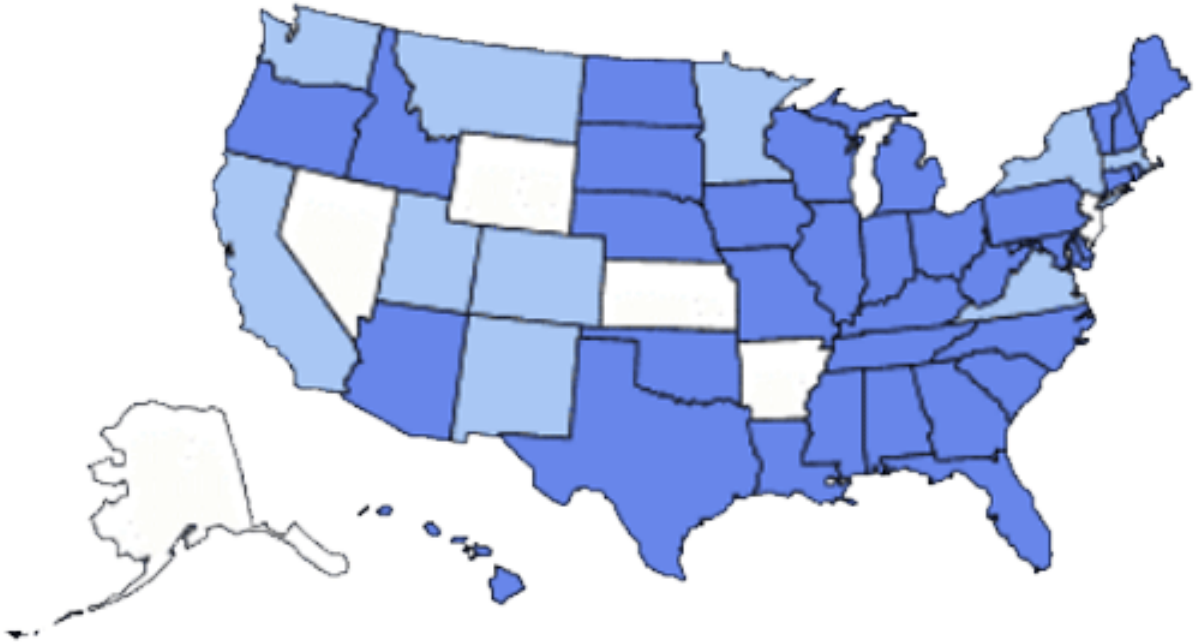

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Source:Mokdad A.H, et al. *J Am Med Assoc* 2001;286:10

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Obesity Trends* Among U.S. Adults

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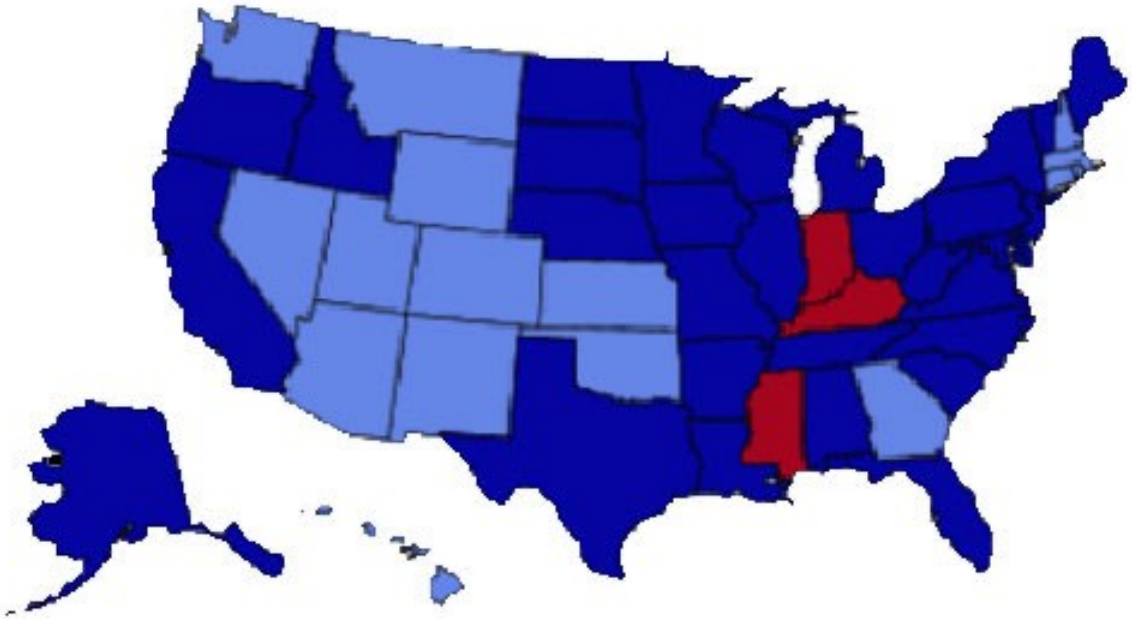

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Obesity Trends* Among U.S. Adults

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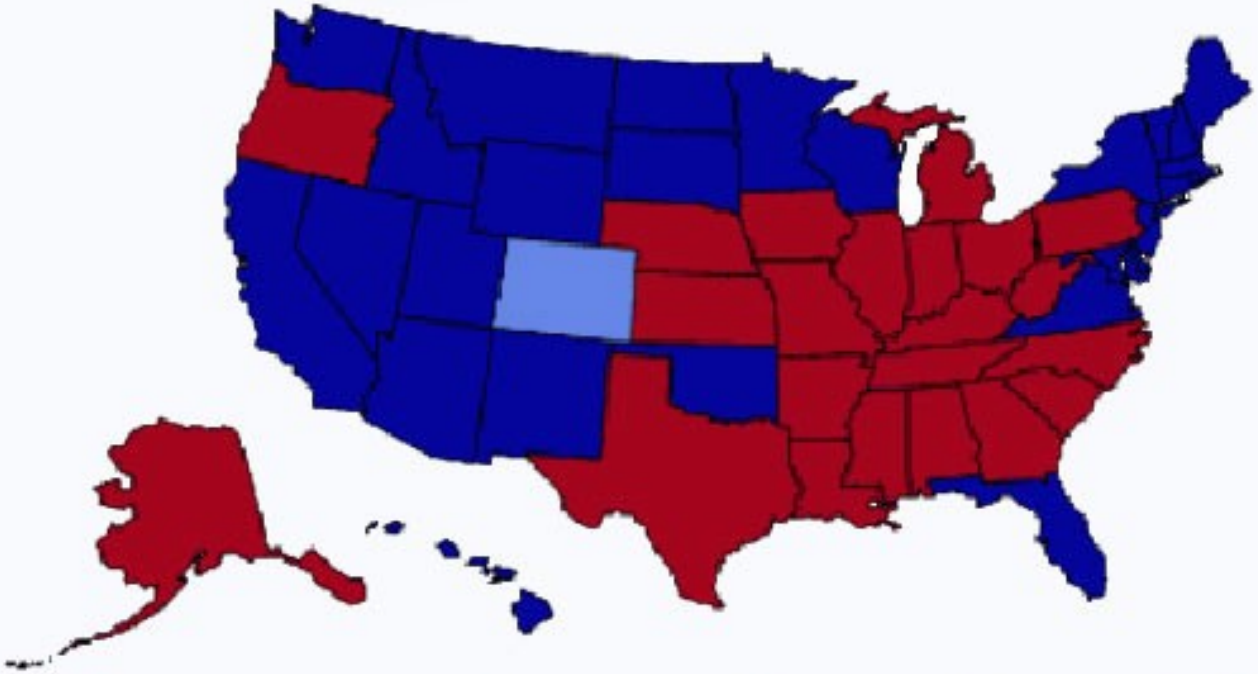

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Obesity Trends* Among U.S. Adults

BRFSS, 2001

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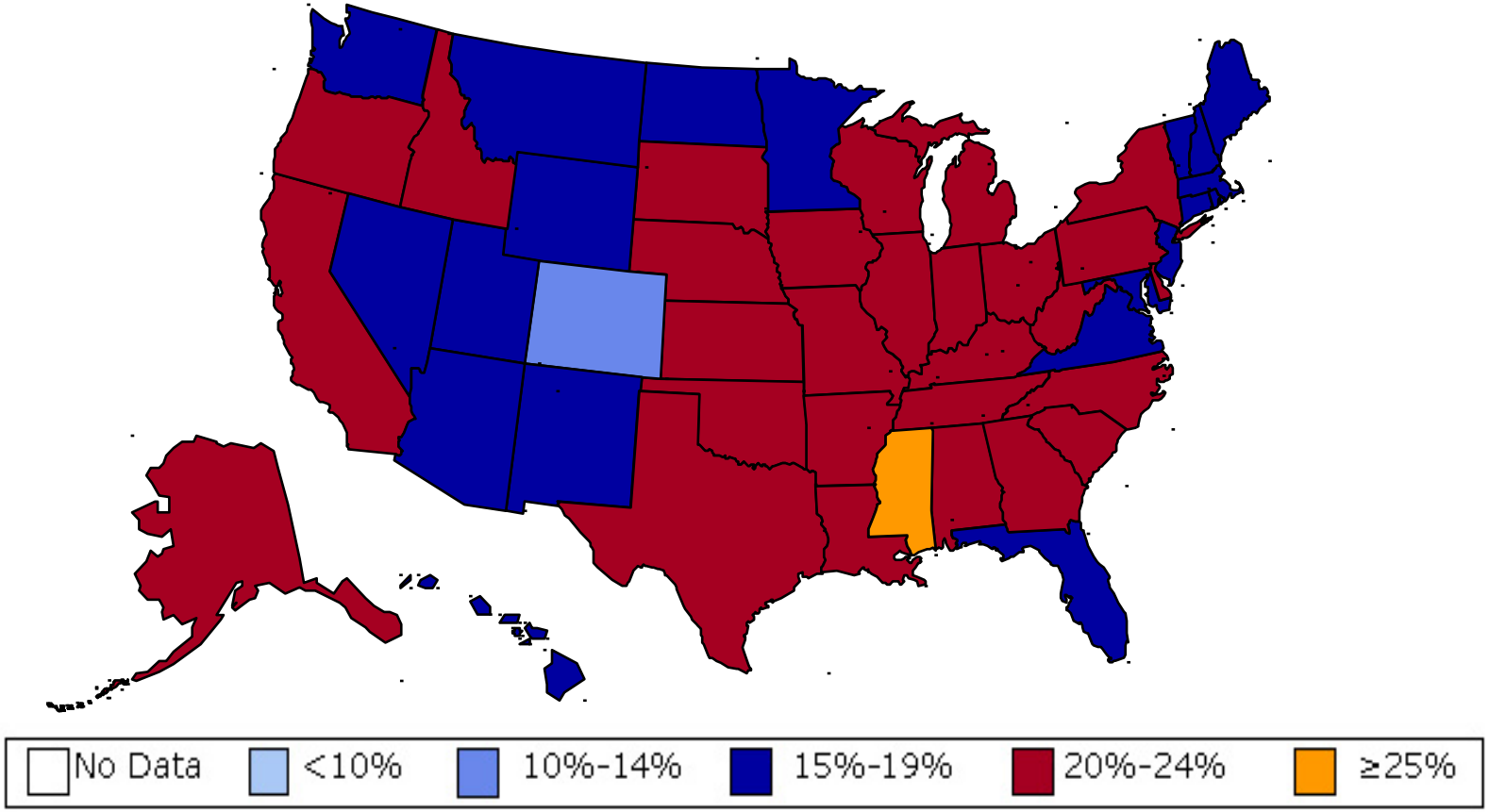


Source: Mokdad A H, et al. *J Am Med Assoc* 1999;282:16, 2001;286:10.

What We Do Not Know about Overweight & Obesity

- "Ideal" weights for optimal health in all populations
- Why some people become overweight and others do not
- Relatively little is known about the prevention and treatment of overweight and obesity on a population-wide basis

What We Do Know

- Obesity is the cause of 300,000 deaths/yr
- The cause is multifactorial- genetic, behavioral and environmental
- The treatment is multidimensional
- Long term maintenance of weight loss is not often achieved

Assessing Body Composition

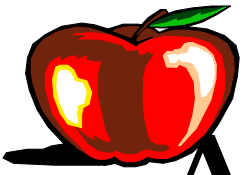
- **Body Fat % based on gender**
  - **Levels of increased risk:**
    - **22% - Men**
    - **33% - Women**

  Age Adjusted (40+)

  23% - Men 34% - Women

  Recommended Levels for Americans:

  - **18 -23% - Men**
  - **25 -30% - Women**

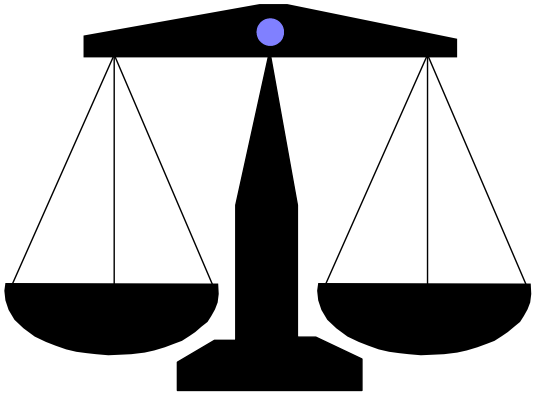


Assessing Body Composition

- **Other Body Composition Measurements**
  - **Waist to Hip Ratio**
  - **Skinfold Calipers**
  - **Hydrostatic Weighing**
  - **Bioelectrical Impedance**
  - **Body Mass Index (BMI)**
  - **Bod Pod**
  - **DEXA**

Body Mass Index
What do the numbers mean?

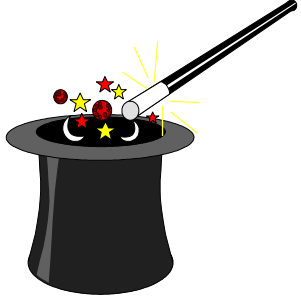
- **Healthy weight = 18.5 – 24.9**
- **Overweight = 25.0 – 29.9**
- **Obesity**
  - **Class I: 30.0 – 34.9**
  - **Class II: 35.0 – 39.9**
  - **Class III: >40.0**



Dieting…
"I've been dieting for a month and all I've lost is 31 days!"

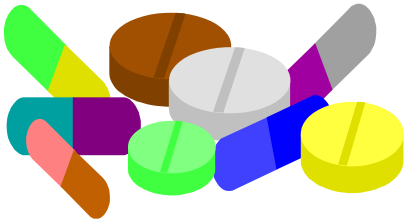
- **In the pursuit of thinness…**
  - **Each year, 20 million Americans go on a diet; almost half of all U.S. middle-aged women**
  - **$60 billion is spent per year**
  - **Average weight loss < 5 lbs**
  - **95% of weight lost is regained within 5 years**
  - **½ of 1% who reach goal weight succeed after 5 years**

Isn't there a "Magic Pill"?



- **Most popular "over-the-counter"**
  - **Herbal Fen-phen**
    - **Main ingredient: ephedra (Ma Huang), amphetamine-like compound**
    - **Potentially lethal stimulant that effects the Central Nervous System and the heart**
  - **FDA states NOT shown to be safe or effective**
    - **1994-98, 800 reports of adverse affects: high blood pressure, irregular heart beat, tremors, insomnia, seizures, nervousness, heart attacks, strokes and death**

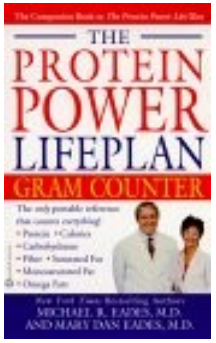
Sibutramine/Meridia
Orlistat/Xenical

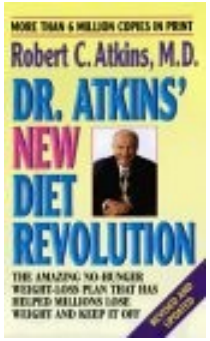


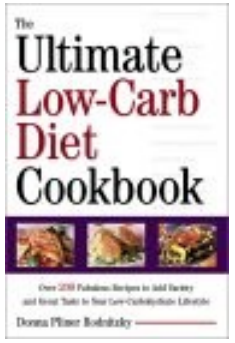
- **Should be used with healthier eating & exercise program**
- **Only for those with BMI ≥ 30 and other conditions that could be improved with weight loss**
- **Weight loss modest (7-10 lbs more than diet alone)**
- **Side effects include:**
  - **small increase in dry mouth, blood pressure, headaches, constipation, insomnia**
  - **Diarrhea, fatty stools, gas and oily rectal seepage**
  - **Interferes with absorption of fat-soluble vitamins (A, D, E, & K) and beta carotene**

Fad Diets:
Why do you think they're called "Fad"?

- **Most popular - High Protein, Low Carbohydrate**
  - **Current hot diet books- Protein Power, Enter the Zone, Dr. Atkins' New Diet Revolution, The 5 Day Miracle Diet**





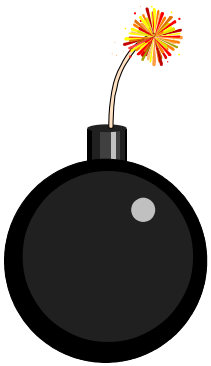


High-Protein, Low-Carbohydrate Diet

- **Can be harmful to the kidneys and liver**
- **Side effects include:**
  - **dizziness, headache, fatigue, nausea, diarrhea, low blood pressure, dehydration, weakness and**

    insomnia

Liquid Protein Diets



- **Includes Liquid Protein Drinks, Protein Powder Supplements**
- **Often not enough calories, leading to decreased metabolism**
- **Promotes ketosis, temporary fluid weight loss (not body fat) which is quickly regained once off diet**
- **Not a long-term lifestyle approach**
- **Side effects can be even more severe than high-protein, low-carbohydrate diet, including:**
  - **irregular heart beat, heart, kidney and liver damage, heart attack, diarrhea, dehydration, nausea, hair loss, nervous disorder, abdominal cramps, death**

The Pitfalls….

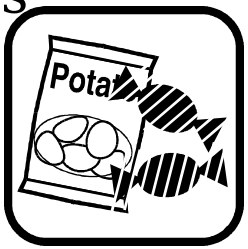
- Feelings of deprivation
- Binge eating on favorite foods
- Overeating and weight regain
- Guilt
- Too few calories
- Metabolism lowers
- Increased fat storage
- Disordered eating is on the rise, especially among the adolescent

Calories Count
Energy In = Energy Out

- To lose weight, energy intake must be reduced
- One pound of body fat = 3500 kcal
- To lose 1 lb/wk, decrease caloric intake by 500 kcal/day
- To lose 2 lb/wk, decrease caloric intake by 1000 kcal/day

How to save 150 kcal

- Reduce intake by
  - 1 oz potato chips



  - Substitute diet soda for regular soda

- Increase activity by
  - Running 1.5 miles in 15 min

  - Cycling 4 miles in 15 min

Alcohol and Intake

- Alcohol is high in energy density making it easy to consume excess calories
- Alcohol's calories add on to the calories from foods
- Combining alcoholic beverages with high-fat, energy-dense foods promotes weight gain
- Alcohol lowers inhibitions, including those against overeating

Fiber Intake, Satiety & Weight Management

- Increased fiber intake is associated with increased satiety and decreased energy intake
  - Fiber-rich foods take a lot of chewing, enhancing sensory stimulation
  - Fiber slows the passage of foods through the digestive system
- An additional 14g/day fiber is associated with a 10% decrease in energy intake
- There is general agreement that increasing fiber is an effective strategy for weight management

Howarth, et al. Nutrition Reviews 59: 129-139, 2001

Carbohydrates and Weight Management

- Foods minimally processed and high in fiber are the most satiating and are associated with lower body weight
- Increase fiber intake to 20-30g/day
  - Intake should be increased gradually to decrease gastric discomfort
- Patients should choose a diet moderate in sugars
  - Lower intake of sugary drinks
  - Use sugar to enhance palatability of low-calorie foods

Protein and Weight Loss

- The weight loss that occurs on high-protein diets is likely due to restriction in caloric intake
- High-protein diets are often associated with high intakes of saturated fats
- Protein intake should be maintained at 0.4g/lb body weight (15% calories)

Reducing Dietary Fat

- Substitute lower-fat versions for higher-fat versions of frequently eaten foods
- Reduce the amount of fat in meat
- Reduce the use of fat as a flavoring
- Reduce the consumption of fried foods
- Replace high-fat foods with fruits & vegetables
- Eat more whole grains, vegetables, beans, fruit & less meat, dairy & baked goods

Optimal Nutrient Composition for Weight Management

Element	Recommendation
Water	9 cups/day for women 12 cups/day for men
Fat	20-30% of total energy intake
Carbohydrates	>/=55% of total energy intake
Protein	0.4 g/lb of body weight
Alcohol	Limit to 1 drink / day for women Limit to 2 drinks/ day for men
Fiber	20-30 g/day

Rolls & Barnett, The Volumetrics Weight Control Plan, Quill, 2000.

So What Works? Guidelines For Success…

- Eat a low-fat, high carbohydrate diet
- Eat breakfast every day
- Monitor progress
- Get high levels of physical activity, about an hour a day
- Eat five times/day
- Burn an average of 2,800 calories/week; 400 calories/day
- Limit intake of certain foods
- Maintaining weight loss is more difficult than losing it

References and Resources

- Healthy People 2010
- The Dietary Guidelines for Americans
- The Food Guide Pyramid
- American Dietetic Association
  www.eatright.org
  - 1-800-877-1600 x5000
- Health Edco www.wrsgroup.com
  - 1-800-299-3366 x295

References and Resources

- Krames Communications www.krames.com
  - 1-800-333-3032
- Lowfat Lifelines
  - 1-800-294-9801
- Mosby Consumer Health www.mosby.com
  - 1-800-535-9935
- The Weight Control Information Network www.niddknih.gov/NutritionDocs.html

In Summary

- Weight Management is a long-term lifestyle issue
- Maintaining weight loss can be more difficult than losing weight for some individuals
- Look for programs that address it as such!
- The key to weight management is to establish eating and activity patterns that can b sustained
- Questions?